



PUBLIC NOTICE

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FCC Lab Provides Guidance on Certification of Linear Power Amplifiers Used with Cellular and PCS Transmitters

The FCC rules require certification of single and multi-channel Linear Power Amplifiers (LPAs) that are used with cellular and Personal Communications Service (PCS) base station transmitters. This public notice provides guidance on the certification process for LPAs intended to be used with multiple types of such cellular and PCS base station transmitters.

The FCC Laboratory generally has certificated LPAs for use only with the base station transmitters with which they were tested. Manufacturers have requested that the FCC Laboratory grant certification for LPAs without restricting use to particular base station transmitters.

The FCC Laboratory has developed the following policy to accommodate these requests:

LPAs must be tested for compliance with FCC technical standards when used with a base station transmitter. An LPA tested and certified with a specific cellular or PCS base station transmitter may be used with any other certified cellular or PCS transmitter provided the base station transmitter is attenuated, if necessary, so its power level doesn't exceed the maximum rated input level of the LPA, employs the same emission types as the LPA and continues to operate in accordance with its license authorization. Other base station components tested with the certified LPA that are passive in nature and need only be verified for compliance (e.g. combiners, splitters, diplexers, etc.), may be used with any other certified cellular or PCS base station transmitter without having to be re-verified.

Both base station transmitters and LPAs may reduce their output power by up to 15% without re-testing or re-certification. Reductions of more than 15% require filing an application for a Class II permissive change that includes additional test data for conducted spurious emissions.

For multi-channel amplifiers, the Commission will allow inter-modulation measurements on these devices, to be made using either a three signal or two signal test using signal generators rather than specific transmitters. For instructions on performing inter-modulation measurements, go to http://hraunfoss.fcc.gov/eas_public/SilverStream/Pages/pg_html_fts_res.html?letter=1109. The search result contains the FCC recommended test procedure.

This policy reduces the burden on manufacturers that would occur if separate tests and certification were required for every combination of LPA and base station transmitter. For further information please contact Steven Dayhoff at (301) 362-3027, email sdayhoff@fcc.gov.

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